REMARKS

The courtesy of a telephone interview with Examiner Jonathan C. Teixeira Moffat is acknowledged.

Claims 1, 7, and 8 have been amended to clarify composition of the target steam piping system such that the values Qi and Qo and therefore the rations set forth in the claims, namely, Kts, Kx, Kxx and Kxx' cannot be considered to be contemplated by the Fujiwara Publication '716. Claims 1, 7, and 8 have been amended to describe the target steam piping system as equipped with a steam trap and a steam-using device wherein steam is supplied to the steam-using device through the steam piping equipped with a steam trap. Support for this amendment is found in Fig. 1 and lines 13 to 20 on page 26 of the application. Note the sentence which reads: "At respective positions of the steam piping 3, there are mounted the steam traps 2 in connection with the piping and the steam-using apparatus 4." Note also in Fig. 1, traps are positioned either on steam piping or associated with steam using devices.

In the rejection of February 3, 2011, the Examiner rejected claims 1-4 and 6-9 under 35 U.S.C. § 103(a) as being unpatentable over Fujiwara Publication '716. Reconsideration is requested.

The claims in the above-captioned application are directed to a different method of determining the desirability of replacing steam traps based on very different considerations than taught or suggested in the Fujiwara Publication '716.

As described in this application, steam traps are in two categories: (1) steam traps provided on the steam piping and (2) steam traps associated with steam-using devices.

The steam traps on the steam piping are for discharging from the piping condensed water generated from steam condensed in the piping before reaching a steam-using device. For example, if the heat insulation on the steam piping is insufficient, a large amount of steam will be condensed in the piping. The steam traps associated with the steam-using devices discharge water generated during operation of the steam-using devices. For example, when a substance is heated by the steam in a steam-using device, the steam trap associated with the steam-using device discharges condensed water generated from the steam cooled by the substance being heated.

All steam traps are ideally configured to discharge condensed water alone while preventing discharge of steam. At any trap, if there is steam discharged as steam through the trap due to failure or the like, such steam is discharged without being effectively used by the steam-using devices. This is steam corresponding to steam loss which is measured by Fujiwara Publication '716. Fujiwara Publication '716 teaches first determining the steam loss due to malfunctioning of each individual steam trap and aggregating at paragraph [0014].

On the other hand, steam condensed and discharged in steam traps associated with the piping before reaching the steam-using devices is a steam loss (due to condensation and not malfunction of the traps) that is not measured by Fujiwara Publication '716. Applicant's total unknown steam amount Q_x ($Q_x = Q_i - Q_o$) is not the same as the aggregated loss due to trap malfunction. It includes, in addition to the losses due to malfunctioning traps, losses such as condensation in the piping before reaching the steam-using devices.

In the claims, Q_i represents the total amount of steam supplied to the entire evaluation target piping system. The numbers of steam-using devices to which steam is supplied through the evaluation steam piping may be singular or plural.

In the claims, Q_o represents the total <u>necessary</u> steam amount which is a total amount of steam required by the steam-using devices. In other words, Q_o is the amount of steam consumed purely for the purposes of the steam-using devices. It does not include steam losses due to the non-ideas functioning or malfunction of the steam traps associated with the steam-using devices.
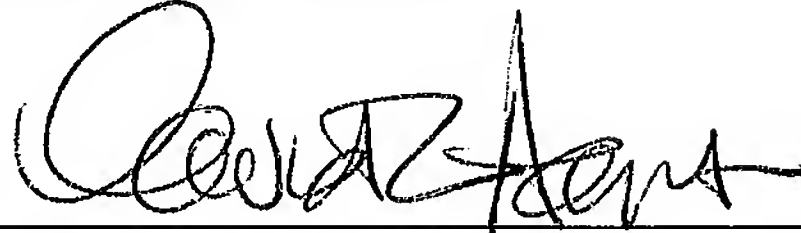
The unknown steam amount Q_x includes trap losses as well as condensation losses and leakage. There is no suggestion in the Fujiwara Publication '716 to use Q_x in evaluating the effectiveness of predetermined system improvements. It does not matter that Q_i and Q_o, though not determined, are inherent in the Fujiwara Publication '716. There is no suggestion or teaching in the Fujiwara Publication '716 to determine and use the quantities Q_i, Q_o, and Q_x to obtain a "ratio of reduction in steam loss."

In view of the foregoing remarks and amendments, it is urged that this application is now in condition for allowance.

Respectfully submitted,

THE WEBB LAW FIRM

By _____
David C. Hanson
Registration No. 23,024
Attorney for Applicant
One Gateway Center
420 Ft. Duquesne Blvd., Suite 1200
Pittsburgh, PA 15222
Telephone: (412) 471-8815
Facsimile: (412) 471-4094
E-mail: webblaw@webblaw.com